

# CSCE Undergraduate Advising Handbook 2013-2014

## Departmental Contacts:

Department Head – Dr. Susan Gauch, [sgauch@uark.edu](mailto:sgauch@uark.edu)

Associate Department Head – Dr. Gordon Beavers, [gordonb@uark.edu](mailto:gordonb@uark.edu)

Main Office – 479-575-6197

<http://www.csce.uark.edu>

## University of Arkansas Information

### ***Campus Information:***

Catalog of Studies

<http://catalogofstudies.uark.edu>

College of Engineering Scholarships

479-575-3051

<http://www.engr.uark.edu/Scholarships&FinancialAid.htm>

Career Development Center

479-575-2805

<http://www.engr.uark.edu/home/4394.php>

Study Abroad

479-575-7582

<http://www.engr.uark.edu/home/4462.php>

Honors College

479-575-7678

<http://honorscollege.uark.edu>

Registered Student Organizations

479-575-5255

<http://osa.uark.edu/rso/>

Enhanced Learning Center

479-575-2885

<http://elc.uark.edu>

University Health Center

479-575-4451

<http://health.uark.edu>

## CSCE Department Information

### ***Academic Advising:***

Students are assigned a CSCE faculty advisor their first semester of enrollment in a CSCE program. Typically, this advisor will remain with the student throughout their academic career. Students

can find the name of their faculty advisor in the ISIS system in their student account or by contacting the CSCE Department.

Faculty contact information can be found at <http://csce.uark.edu/2212.php>

### **How Advising Works:**

Priority registrations are held in the fall and spring semesters, allowing currently enrolled students to register for classes prior to new students entering the university. Students are ***strongly encouraged*** to register during these periods because certain classes tend to fill up fast and seating may be limited or low enrollments could mean that classes get cancelled.

Students must see their advisor prior to any registration period to review the course plans, answer questions, and get assistance with academic problems. Advising periods are scheduled before Priority Registration begins.

Advisors will be provided with updated materials to assist in advising prior to registration periods.

### **How to Get Advised:**

Step 1:

Complete the Advising plan, which can be found at <http://www.csce.uark.edu/Advising-plan.pdf>. This is an interactive pdf and should be completed before printing the form. List the courses that you plan to take and make a note of any questions.

Step 2:

Schedule an appointment with your faculty advisor during the advertised times. Advisors will contact their advisees about appointment periods. The advisor will review the course plan and verify that pre-requisites have been met. Your faculty advisor will remove the advising hold at the end of your appointment. This is also a good opportunity to talk about career plans, co-ops, and other academic issues.

### ***Degree Program Changes:***

Students must meet all requirements of their degree programs and are expected to keep informed concerning current regulations, policies, and program requirements in their field of study.

Changes made in curriculum at a level beyond that at which a student is enrolled **may become graduation requirements**. Changes made in the curriculum at a lower level than the one at which a student is enrolled are not required for that student. Students should consult their faculty advisor for additional information. It is the student's responsibility to ensure they meet all degree requirements before graduation.

### ***CSCE Majors:***

The department offers the following undergraduate degrees:

- Bachelor of Science in Computer Engineering
- Bachelor of Science in Computer Science

- Bachelor of Arts in Computer Science

In addition, the department also offers the following graduate degrees:

- Master of Science in Computer Engineering
- Master of Science in Computer Science
- Doctor of Philosophy in Computer Science
- Doctor of Philosophy in Engineering with a major in Computer Engineering

### **Changing Majors:**

Any student interested in changing their major to Computer Science or Computer Engineering should first visit with the Associate Department Head.

Students wanting to switch from CS to CE or CE to CS should discuss this first with their faculty advisor. The first two semesters of study are identical, so the transfer at that point is easy. There are minor differences in the third and fourth semester that still allow for change. After the fifth and sixth semester there are differences that might create some issues (such as having to take more coursework).

Completion of the forms to process the change of major should be done in the Academic Student Office in Bell Engineering room 3189.

## **Degree Requirements Information**

### ***CSCE Honors Program***

Admission requirements for the Honors Program are as follows: entering freshman must have at least a 3.5 high school GPA and at least 28 composite score on the ACT; entering transfer students must have a 3.25 GPA on their transfer work. Students who do not qualify initially for the Honors Program are eligible after one year if they earn at least a 3.25 GPA.

Application for the Honors Program must be made through the Academic Dean's office in Bell 3189.

The department considers the following requirements necessary to graduate with honors:

- The candidate must satisfy the requirements set forth by the College of Engineering.
- A student must obtain at least a 3.5 grade-point average in required Computer Engineering and/or Computer Science courses.
- The student must complete a total of 12 hours of honors credit. Seven hours of Honors credit must be in the major, including 4 hours of Honors Thesis taken as two consecutive semesters of CSCE 491VH and 3 hours of non-thesis class work (courses with honors designation or 5000 level).

Guidelines for completion of the honors program and required forms for submission of thesis and verification for degree completion can be found at <http://www.csce.uark.edu/2309.php>

## **CSCE Electives**

The CSCE Electives can be chosen from any CSCE 4000+ course except CSCE 490V, Individual Study.

In addition, the Computer Engineering students can choose to take the following courses:

CSCE 3313 Algorithms  
ELEG 3923 Microprocessor System Design

B.A. students can choose from any CSCE 3000+ course with the exception of CSCE 490V.

## **CSCE B.S. Humanities/Social Science Electives**

All students at the University of Arkansas-Fayetteville are required to meet the University Core (State Minimum Core). If the core is not met, it could affect graduation.

All **CE and CS Bachelor of Science** students are required to take:

A) 3 hours of Fine Arts from the following list:

- Fine Arts – ARCH 1003, ARHS 1003, COMM 1003, DANC 1003, DRAM 1003, LARC 1003, MLIT 1003

B) 3 hours of humanities - PHIL 3103 Ethics and the Professions

- **3 hours** U.S. History or Government

Choose one of the following:  
HIST 2003, HIST 2013, PLSC 2003

- **9 hours** of Social Science

Courses must be taken from at least two different departments:

AGEC 1103, AGECE 2103  
ANTH 1023  
ECON 2013, ECON 2023, ECON 2143  
GEOG 1123, GEOG 2003  
HESC 1403, HESC 2413  
HIST 1113, HIST 1123, HIST 2003\*, HIST 2013\*  
HUMN 1114H, HUMN 2114H  
PLSC 2003\*, PLSC 2013, PLSC 2203  
PSYC 2003  
RESM 2853  
RSOC 2603  
SOC 2013, SOCI 2033

*\*If not selected to meet the History/Government elective*

## ***CSCE B.S. Common Information***

### **CSCE Basic Science Electives**

Approved courses with lab - ASTR 2003/2001L Survey of the Universe; BIOL 1543/1541L Principles of Biology; ENSC 1003/1001L Environmental Science; GEOL 1113/1111L General Geology; BIOL 1603/1601 Principles of Zoology; BIOL 2213/2211L Human Physiology; CHEM 1133/1131L University Chemistry II for Engineers; PHYS 3614 Modern Physics

### ***Free Electives***

Free electives can be chosen from any area but cannot be remedial courses. Courses that will not count are ANTH 0003, PHSC 0003, ENGL 0003, MATH 0003, CIED 0003, MATH 1203, MATH 1213, and MATH 1285.

### ***3.6 Computer Engineering and Computer Science B.S.***

The following information pertains to the B.S. programs in computer engineering and computer science.

## Computer Engineering Semester Plan – 2013-2014

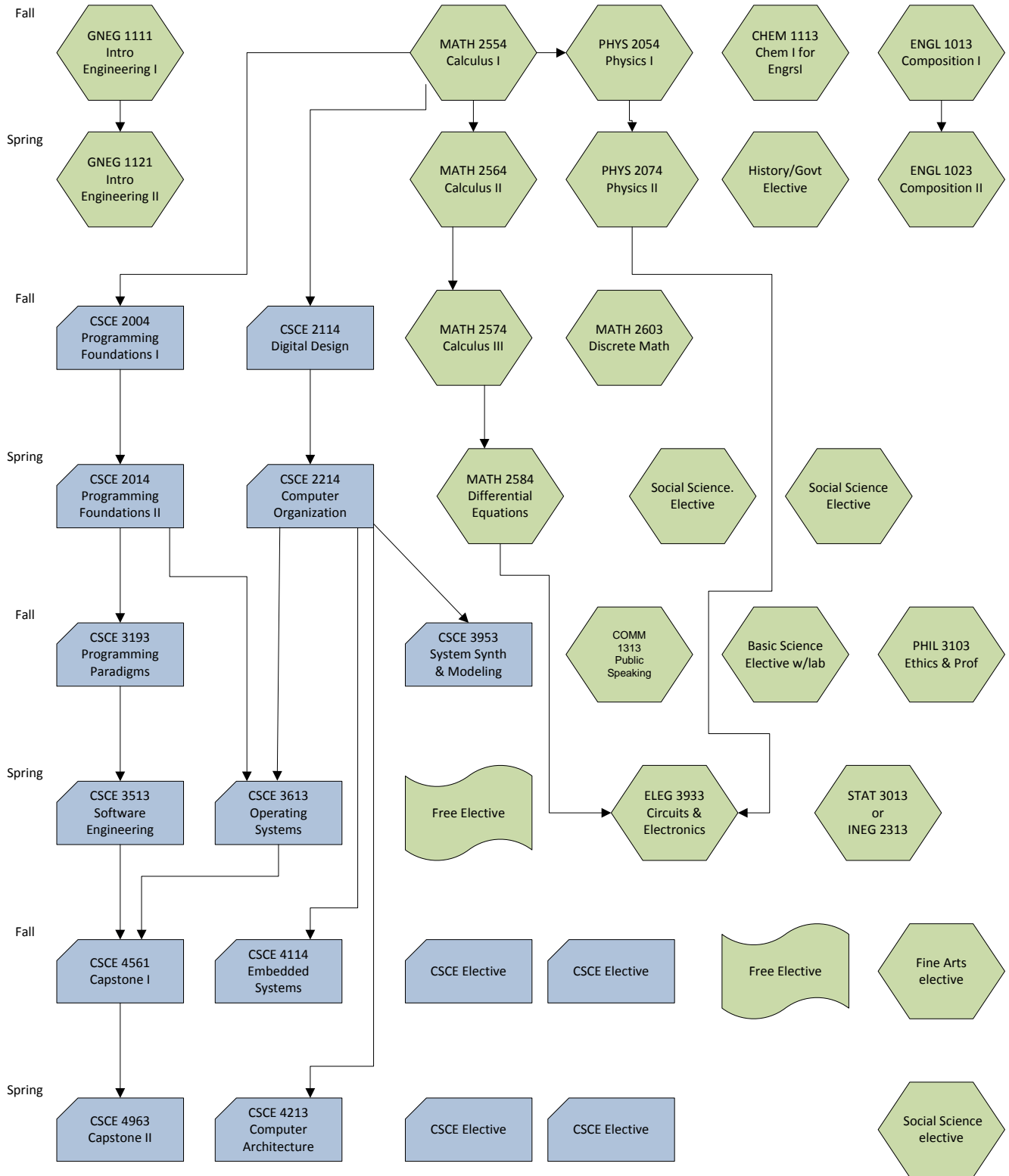
<p><b>Fall Semester Year 1</b></p> <p>4 MATH 2554 Calculus I            3 CHEM 1113 University Chemistry I for Engineers            4 PHYS 2054 University Physics I            1 GNEG 1111 Introduction to Engineering I            3 ENGL 1013 English Composition</p> <p><b>15 Semester hours</b></p>	<p><b>Spring Semester Year 1</b></p> <p>4 MATH 2564 Calculus II            4 Freshman Science elective*            3 History/Government elective            1 GNEG 1121 Introduction to Engineering II            3 ENGL 1023 Composition II</p> <p><b>15 Semester hours</b></p>
<p><b>Fall Semester Year 2</b></p> <p>4 MATH 2574 Calculus III            4 CSCE 2004 Programming Foundations I            4 CSCE 2114 Digital Design            3 MATH 2603 Discrete Math</p> <p><b>15 Semester hours</b></p>	<p><b>Spring Semester Year 2</b></p> <p>4 MATH 2584 Differential Equations            4 CSCE 2214 Computer Organization            4 CSCE 2014 Programming Foundations II            3 Social Science elective            3 Social Science elective</p> <p><b>18 Semester hours</b></p>
<p><b>Fall Semester Year 3</b></p> <p>3 CSCE 3953 System Synthesis &amp; Modeling            3 CSCE 3193 Programming Paradigms            3 PHIL 3103 Ethics &amp; the Professions            4 Basic Science elective with lab            3 COMM 1313 Public Speaking</p> <p><b>16 Semester hours</b></p>	<p><b>Spring Semester Year 3</b></p> <p>3 CSCE 3613 Operating Systems            3 CSCE 3513 Software Engineering            3 ELEG 3933 Circuits &amp; Electronics            3 Free elective            3 STAT 3013 Introduction to Probability and Statistics            or INEG 2313 Applied Probability and Statistics for Engineers I</p> <p><b>15 Semester hours</b></p>
<p><b>Fall Semester Year 4</b></p> <p>1 CSCE 4561 Capstone I            4 CSCE 4114 Embedded Systems            3 CSCE elective            3 CSCE elective            3 Fine Arts elective            3 Free Elective</p> <p><b>17 Semester hours</b></p>	<p><b>Spring Semester Year 4</b></p> <p>3 CSCE 4963 Capstone II            3 CSCE 4213 Computer Architecture            3 CSCE elective            3 CSCE elective            3 Social Science elective</p> <p><b>15 Semester hours</b></p>

### 126 Total hours

\* Choose between PHYS 2074 University Physics II or CHEM 1133/1131L University Chemistry II for Engineers and lab.

# Computer Engineering – Bachelor of Science

Fall 2013



## Computer Science Semester Plan – 2013-2014

<p><b>Fall Semester Year 1</b></p> <p>4 MATH 2554 Calculus I            3 CHEM 1113 University Chemistry I for Engrs            4 PHYS 2054 University Physics I            1 GNEG 1111 Introduction to Engineering I            3 ENGL 1013 English Composition</p> <p><b>15 Semester hours</b></p>	<p><b>Spring Semester Year 1</b></p> <p>4 MATH 2564 Calculus II            4 Freshman Science elective*            1 GNEG 1121 Intro to Engineering II            3 ENGL 1023 Composition II            3 History/Government elective</p> <p><b>15 Semester hours</b></p>
<p><b>Fall Semester Year 2</b></p> <p>3 MATH 2603 Discrete Math            4 Basic Science elective with lab            4 CSCE 2004 Programming Foundations I            4 CSCE 2114 Digital Design            3 Social Science elective</p> <p><b>18 Semester hours</b></p>	<p><b>Spring Semester Year 2</b></p> <p>3 MATH 3103 Combinatorics            4 CSCE 2014 Programming Foundations II            4 CSCE 2214 Computer Organization            3 Fine Arts elective            3 Social science elective</p> <p><b>17 Semester hours</b></p>
<p><b>Fall Semester Year 3</b></p> <p>3 CSCE 3193 Programming Paradigms            3 CSCE 3313 Algorithms            3 COMM 1313 Public Speaking            3 MATH 3083 Linear Algebra            3 PHIL 3103 Ethics &amp; the Professions</p> <p><b>15 Semester hours</b></p>	<p><b>Spring Semester Year 3</b></p> <p>3 CSCE 3613 Operating Systems            3 CSCE 3513 Software Engineering            3 Free elective            3 STAT 3013 Intro to Probability and Statistics            (INEG 2313 can be substituted)            3 Social Science elective</p> <p><b>15 Semester hours</b></p>
<p><b>Fall Semester Year 4</b></p> <p>1 CSCE 4561 Capstone I            3 CSCE 4523 Database Management            3 CSCE elective            3 CSCE elective            3 CSCE elective            3 Free elective</p> <p><b>16 Semester hours</b></p>	<p><b>Spring Semester Year 4</b></p> <p>3 CSCE 4963 Capstone II            3 CSCE elective            3 CSCE 4323 Formal Languages            3 Free elective            3 Free elective</p> <p><b>15 Semester hours</b></p>

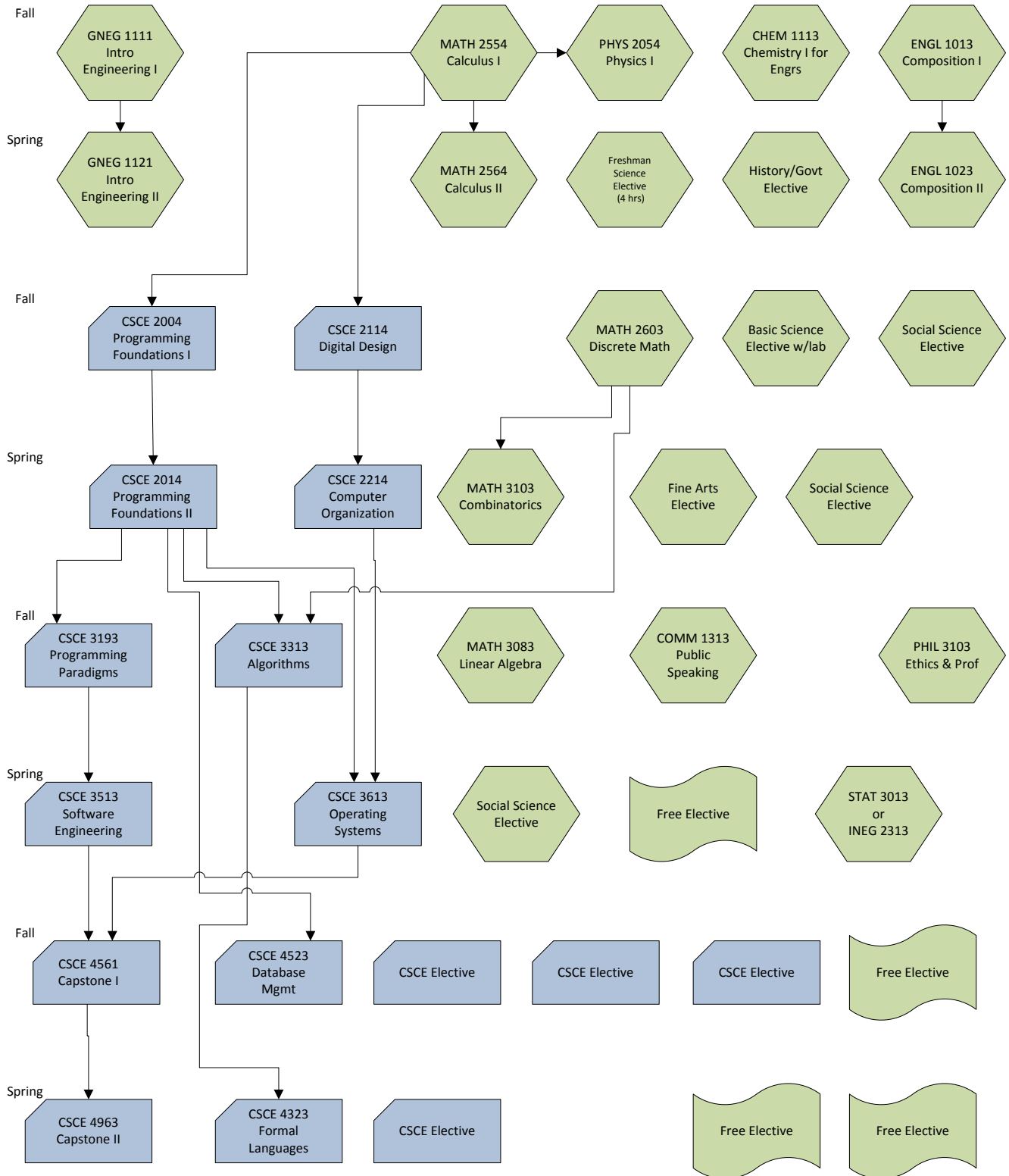
**126 Total hours**

\* Choose between PHYS 2074 University Physics II or CHEM 1133/1131L University Chemistry II for Engineers and lab.



# Computer Science – Bachelor of Science

Fall 2013



## **Computer Science B.A.**

The following information pertains to the Computer Science Bachelor of Arts degree. The BA degree has six Study Areas:

1. Computer Science - any CSCE course 2000 level or above (additional 9 hours above required coursework)
2. Enterprise Resource Planning - WCOB 4213; WCOB 4223; ISYS 4233
3. Enterprise Systems - WCOB 4213; ISYS 4453; ISYS 4463
4. Business Applications - WCOB 4213; ISYS 3293; ISYS 3393
5. Mathematics – any three of the following: MATH 3083; MATH 3103; MATH 4253; MATH 4353; MATH 4363
6. Geoinformatics - GEOS 3543 and two of the following: GEOS 4413; GEOS 4553; GEOS 4583; GEOS 4593

Students must select **only one** Study Area and meet the requirements of that area to graduate.

All **CS Bachelor of Arts** students are required to take:

3 hours of Fine Arts from the following list:

- Fine Arts – ARCH 1003, ARHS 1003, COMM 1003, DANC 1003, DRAM 1003, LARC 1003, MLIT 1003

3 hours of humanities - PHIL 2203 Logic

- **3 hours** U.S. History or Government

Choose one of the following:

HIST 2003, HIST 2013, PLSC 2003

- **9 hours** of Social Science

Courses must be taken from at least two different departments:

AGEC 1103, AGECE 2103

ANTH 1023

ECON 2013, ECON 2023, ECON 2143

GEOG 1123, GEOG 2003

HESC 1403, HESC 2413

HIST 1113, HIST 1123, HIST 2003\*, HIST 2013\*

HUMN 1114H, HUMN 2114H

PLSC 2003\*, PLSC 2013, PLSC 2203

PSYC 2003

RESM 2853

RSOC 2603

SOCI 2013, SOCI 2033

*\*If not selected to meet the History/Government elective*

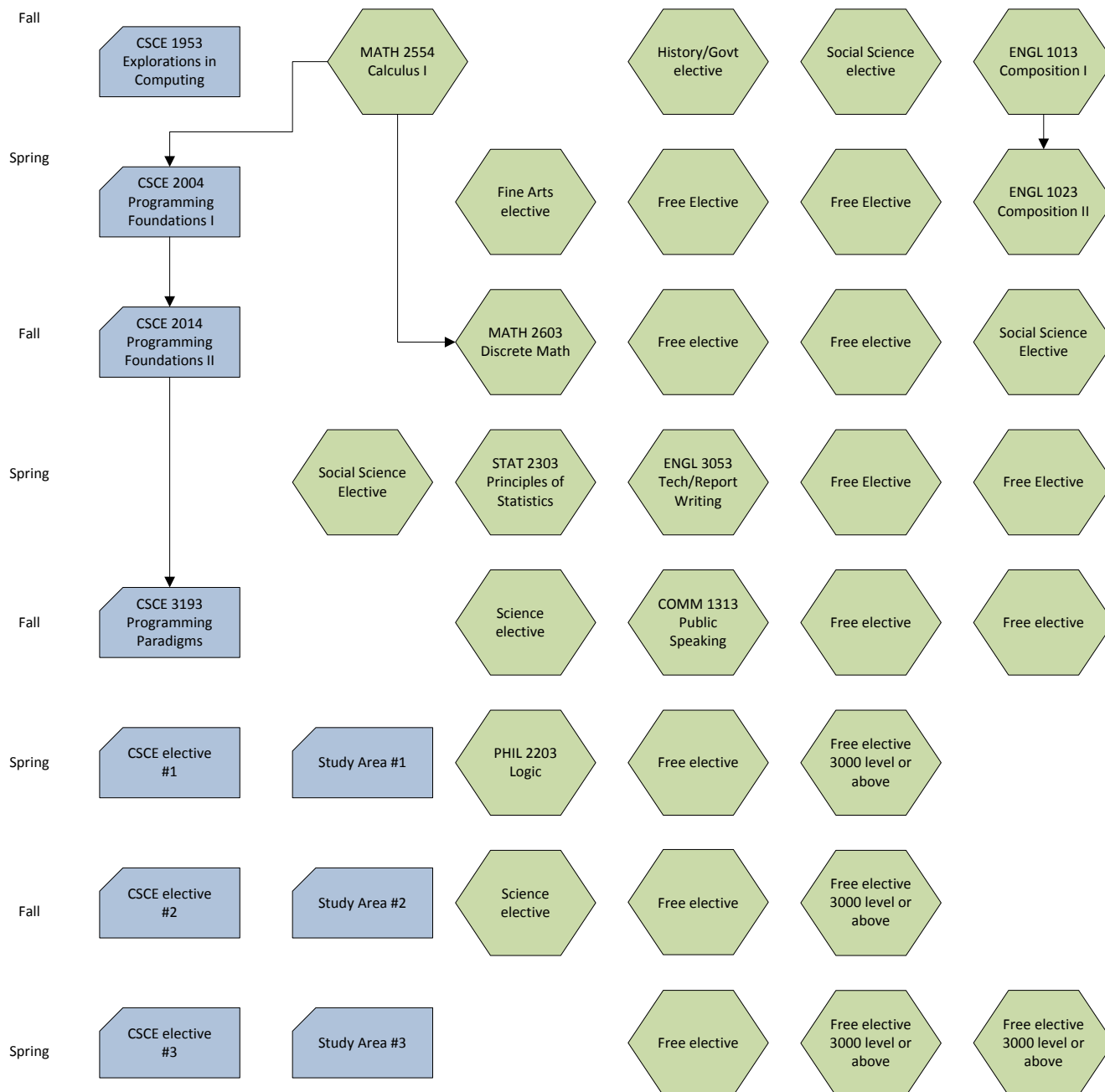
## Computer Science BA Semester Plan – 2013-2014

<p><b>Fall Semester Year 1</b></p> <p>3 CSCE 1953 Explorations in Computing            3 ENGL 1013 Composition I            4 MATH 2554 Calculus I            3 HIST 2003 or HIST 2013 or PLSC 2003            3 Social science elective</p> <p><b>16 Semester hours</b></p>	<p><b>Spring Semester Year 1</b></p> <p>4 CSCE 2004 Programming Foundations I            3 ENGL 1023 Technical Composition II            3 Free Elective            3 Fine Arts elective (from University/State core)            3 Free Elective</p> <p><b>16 Semester hours</b></p>
<p><b>Fall Semester Year 2</b></p> <p>4 CSCE 2014 Programming Foundations II            3 MATH 2603 Discrete Mathematics            3 Social Science elective (from University/State core)            4 Free Electives</p> <p><b>14 Semester hours</b></p>	<p><b>Spring Semester Year 2</b></p> <p>3 ENGL 3053 Technical &amp; Report Writing            3 STAT 2303 Principles of Statistics            3 Social Science elective (from University/State core)            3 Free Electives            3 Free Electives</p> <p><b>15 Semester hours</b></p>
<p><b>Fall Semester Year 3</b></p> <p>3 CSCE 3193 Programming Paradigms            3 COMM 1313 Public Speaking            4 Science elective (from University/State core)            3 Free Electives            3 Free Electives</p> <p><b>16 Semester hours</b></p>	<p><b>Spring Semester Year 3</b></p> <p>3 3000-level or higher CSCE Elective (1)            3 Study Area (1st Course)            3 PHIL 2203 Logic (meets University/state humanities requirement)            3 Free elective (3000-level or higher)            3 Free Elective</p> <p><b>15 Semester hours</b></p>
<p><b>Fall Semester Year 4</b></p> <p>3 CSCE Elective (2)            3 Study Area (2nd course)            4 Science elective (from University/State core)            3 Free elective (3000-level or higher)</p> <p><b>13 Semester hours</b></p>	<p><b>Spring Semester Year 4</b></p> <p>3 CSCE elective (3)            3 Study Area (3rd course)            3 Free Elective            3 Free elective (3000-level or higher)            3 Free elective (3000-level or higher)</p> <p><b>15 Semester hours</b></p>

**120 Total hours**

# Computer Science – Bachelor of Arts

Fall 2013



**STUDY AREAS:**

Computer Science – additional CSCE courses 2000 level or above

Enterprise Resource Planning – WCOB 4213, WCOB 4223, ISYS 4233

Enterprise Systems – WCOB 4213, ISYS 4453, ISYS 4463

Business Applications – WCOB 4213, ISYS 3293, ISYS 3393

Mathematics – MATH 3083, MATH 3103, MATH 4253, MATH 4353, OR MATH 4363

Geoinformatics – GEOS 3543 and two of the following: GEOS 4413, GEOS 4553, GEOS 4583, GEOS 4593, GEOS 4863